4 Sheets—Sheet 1.

J. L. JONES.

TOBACCO-PRESS.

No. 176,007. Patented April 11, 1876.

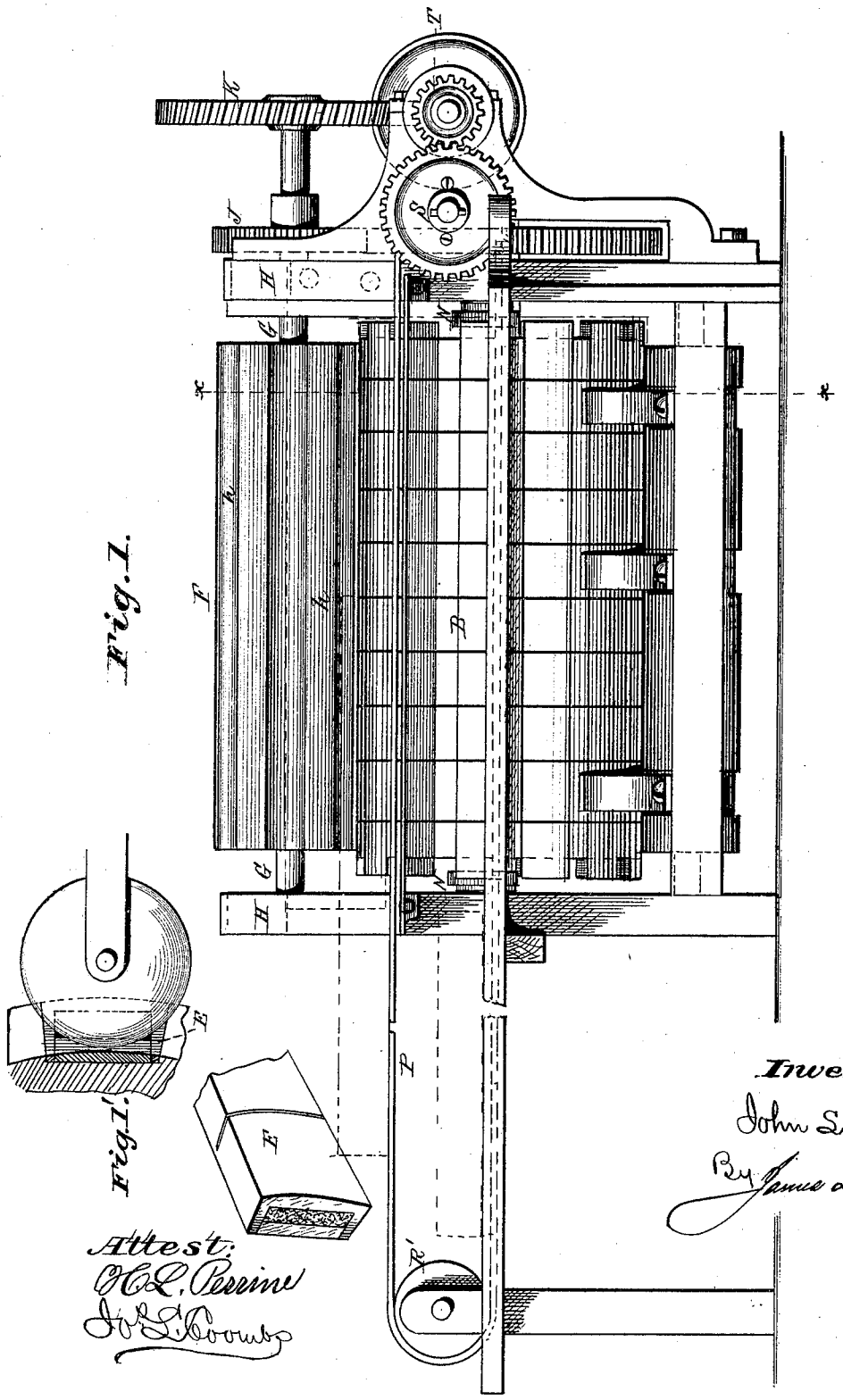

Fig. 1.

Fig. 1'.

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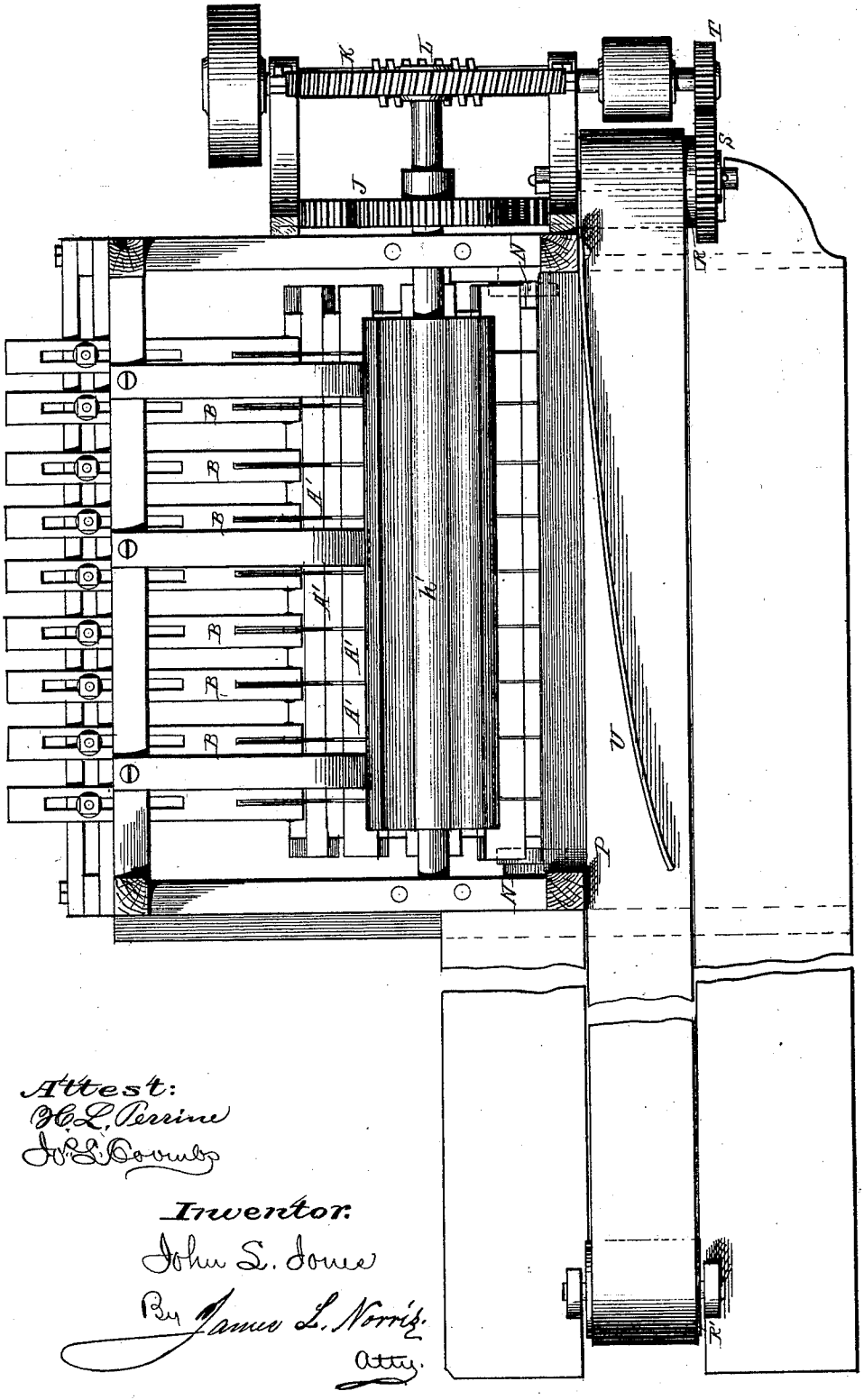

Fig. 2.

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Fig. 3.

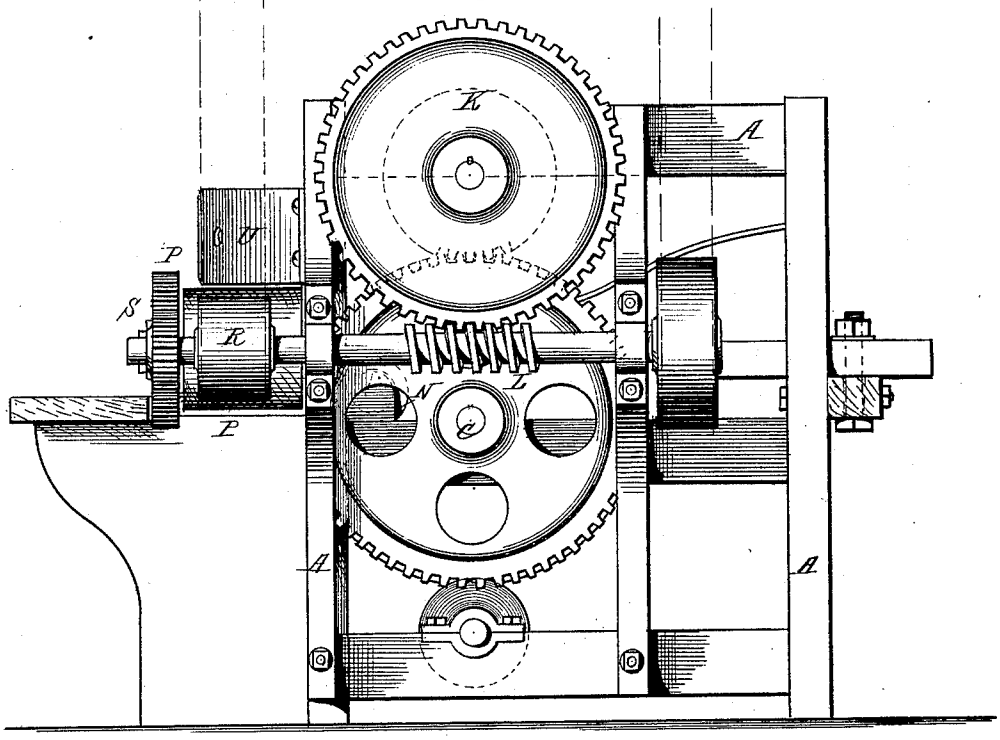
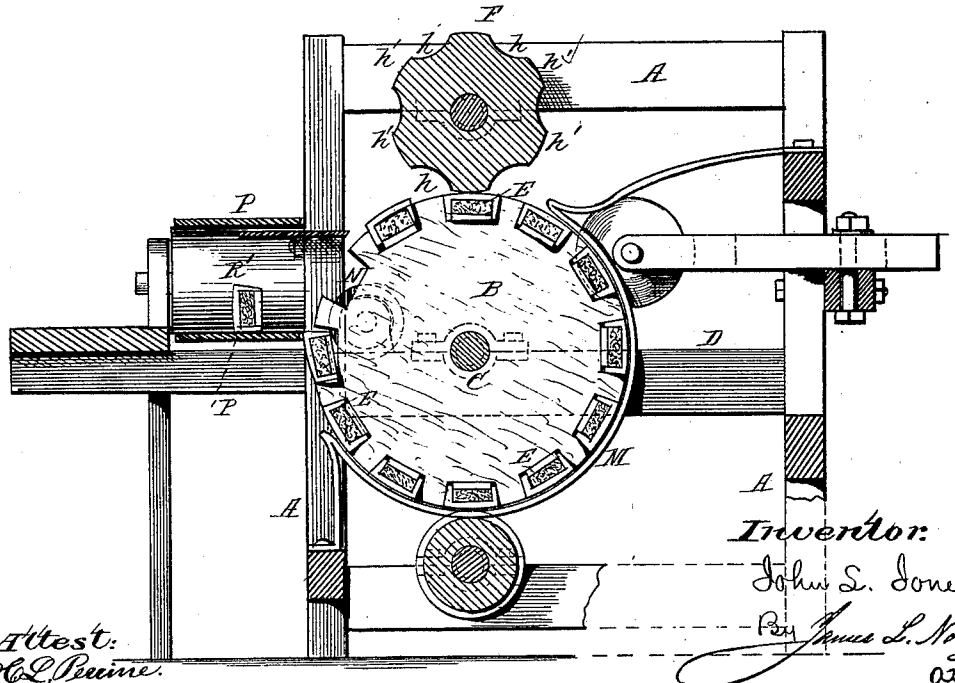


Fig. 4.



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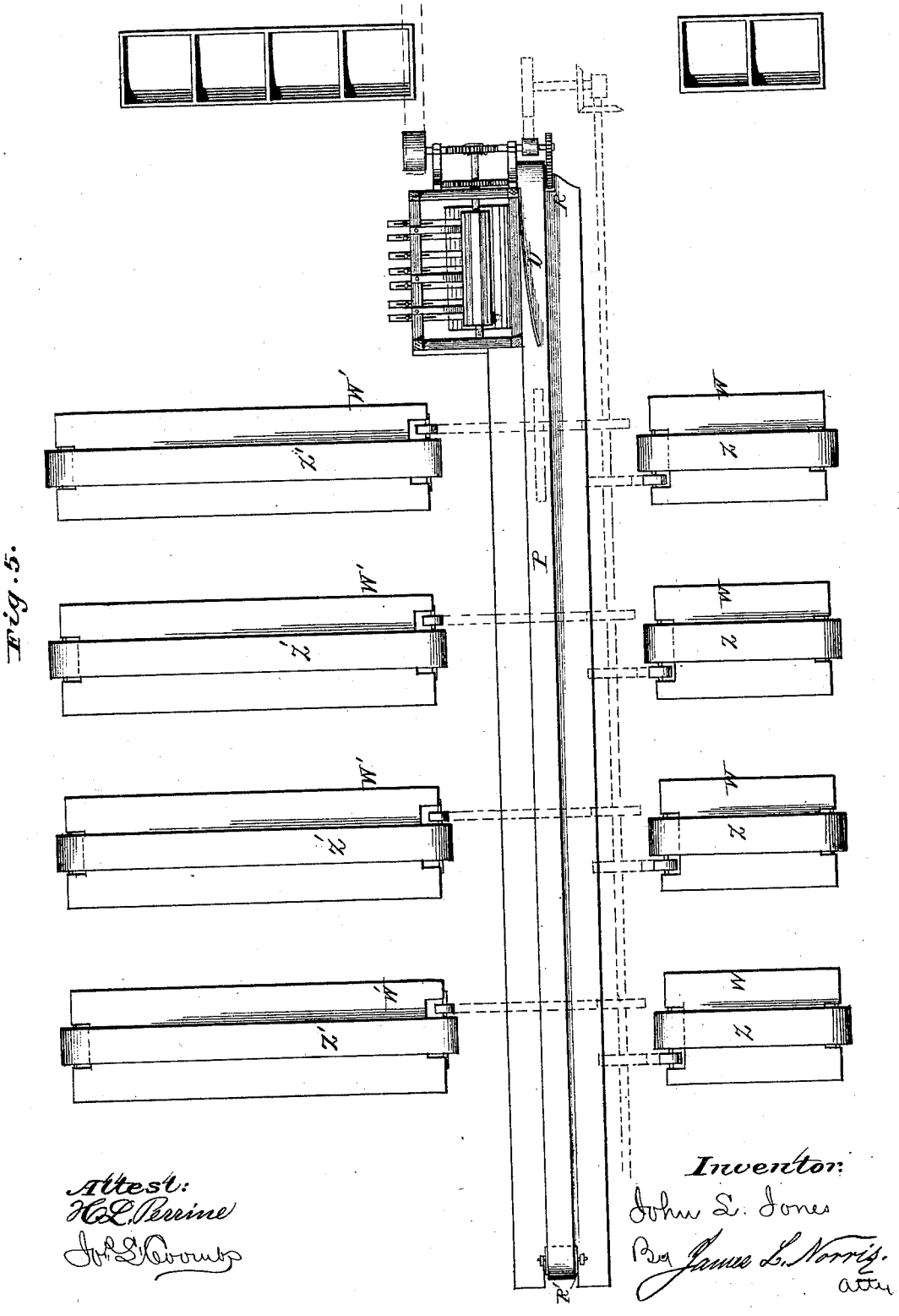

Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN L. JONES, OF GREENSBOROUGH, NORTH CAROLINA, ASSIGNOR TO MANFRED CALL, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN TOBACCO-PRESSES.

Specification forming part of Letters Patent No. **176,007**, dated April 11, 1876; application filed December 2, 1875.

To all whom it may concern:

Be it known that I, JOHN L. JONES, of Greensborough, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Tobacco-Presses, of which the following is a specification:

This invention relates to a new and improved machine for manufacturing plug-tobacco, its object being to mold, compress, and cut the same automatically without unnecessary handling; and it consists, essentially, in a rotating carrier, into which the molds are automatically delivered, and from which they are automatically carried away by means of an endless belt, a rotating compressing-roller working in connection with said roller in such manner as to compress the tobacco in the molds as they are brought successively under it by the carrier, and a series of adjustable circular cutters, so arranged in relation to the rolls as to cut the plugs after they are compressed into the proper lengths, the molds being slotted at suitable points for the passage of said cutters, and certain devices and combinations for operating the apparatus, as fully hereinafter described and claimed.

In the drawing, Figure 1 represents a front elevation of my improved machine. Fig. 1′ represents a detached view of one of the cutters and mold in which the tobacco is compressed. Fig. 2 represents a top view of the machine; Fig. 3, a side elevation of the same, showing the gearing by which the several parts are put in motion; Fig. 4, a transverse vertical section of the apparatus; and Fig. 5, a plan view of a factory-floor, showing the machine as arranged for use, in connection with the devices for delivering the molds upon the endless belt, and removing the same therefrom after the tobacco is compressed and cut.

The letter A represents a strong frame, constructed of any suitable material, in which the various working parts of the apparatus are mounted. B represents a rotating carrier, mounted upon a shaft, C, which is journaled in suitable bearings D in opposite sides of the frame A. Upon the periphery of the carrier, at suitable intervals, are formed longitudinal recesses of such shape and size as to receive and hold the molds E, in which the tobacco is packed for compression. The said molds consists of shallow rectangular boxes of such size and shape internally as to form the tobacco into conveniently-sized slabs or bars, and are cut or slotted transversely through the tops at suitable intervals, as shown in Fig. 1, in order to allow the circular cutters to cut through the bar of tobacco, and divide it into plugs of proper length, each mold being provided with a follower setting in the bottom of the same, for compressing the tobacco, when the molds are subjected to the action of the compressing-roller. The letter F represents the compressing-roller mounted on a shaft, G, which is journaled at opposite ends in suitable bearings H in the frame A. The periphery of said pressing-roller is fluted or provided with a series of longitudinal concave grooves, *h*, at such points, leaving a series of bearing-surfaces, *h′*, which meet the molds as they are successively brought under the pressing-roller, the speed of the two being relatively regulated by means of proper gearing for the purpose. The ends of the shafts on which the carrier and compressing-roller are mounted project to one side of the apparatus, the shaft G carrying the cog-wheels J and K, one of which gears with a cog-wheel mounted on the end of the carrier-shaft C, the other gearing with a leading screw or worm, L, which derives its motion from any suitable motive power. The letter M represents a retainer or device for holding the molds in the carrier after they have passed the compressing-roller until they are brought to the delivering rollers or wheels N. Said delivering-wheels are journaled at each side of the frame just at the ends of the rotating carrier, toward the front of the same in such position as to fall under the projecting ends of the molds as the carrier rotates, and throw said molds forward out of the recesses in the carrier upon the endless belt or traveling band P. Said apron or band extends longitudinally along the front of the apparatus, being mounted upon pulleys R R′,

one of which is journaled in the frame A, and the other in a suitable frame or standard located at any convenient point in the room in which the machine is located. The band derives its motion from the pulley R, which is provided with a cog-wheel, S, gearing with a pinion, T, on the end of the worm or screw shaft, by which the various working parts of the machine are driven. The letter U represents a guide attached to the frame A directly above the upper side of the endless belt or traveling band, which operates in connection with said band to throw the molds into the recesses in the carrier. The letter A′ represents a series of any desired number of cutting-disks, mounted upon adjustable arms B′ at the rear of the frame A, in such position that they can be set so as to fall into the slots in the molds, the periphery of the carrier between the recesses being similarly slotted, so as not to interfere with the passage of said cutters.

The apparatus as thus constructed is generally arranged in the factory, as illustrated in Fig. 5, the endless band or traveling apron being arranged to extend along the whole length of the room, a series of working tables, W W′, being arranged at each side of said belt, each table being provided with an endless belt, Z Z′. One set of tables is occupied by the packers, the endless belt thereof serving to convey the molds when packed to the main belt, and the other set is occupied by the workmen employed to remove the molds after the tobacco is compressed.

The operation of my machine will be readily understood. The apparatus being put in motion either by hand or other suitable motive power, the traveling belt will carry the molds successively forward to the guide attached to the front of the machine, which will throw the molds into the recesses of the carrier as it revolves. The carrier conveys them in succession under the compressing-roller, after which they are prevented to the action of the cutting-disk, and then carried around to the discharging-rollers, being held in the carrier by the retainer in their passage, and are finally discharged upon the under side of the endless belt, by which they are carried backward to the working tables.

What I claim, and desire to secure by Letters Patent, is—

1. In a machine for compressing tobacco, the combination of the rotating carrier B, constructed with a series of cavities, the tobacco-receiving molds E and the compressing-roller F, all constructed to operate together substantially as and for the object specified.

2. The combination, with the rotating carrier, the tobacco-receiving molds, and the compression-rollers, of the endless traveling belt and guide-plate for automatically depositing the molds in the carrier, substantially as described.

3. The combination, with the rotating carrier, the tobacco-receiving molds, and compressing-roller, of the delivering-rollers and endless belt for automatically discharging and conveying the molds from the machine, substantially as described.

4. The combination, with the slotted rotating carrier, the slotted tobacco-receiving molds, and the compression-roller, of the adjustable cutters, for dividing the tobacco in the molds into plugs, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

JOHN L. JONES.

Witnesses:

JOS. L. COOMBS,

JAMES L. NORRIS.